

REMARKS

Claims 1, 3-5 and 7-14 were previously pending in the application. Claim 10 is canceled and claims 15-18 are added. Therefore, claims 1, 3-5, 7-9 and 11-18 are presented for consideration.

The cancellation of claim 10 is believed to address the drawing objection noted in the Official Action.

Claim 8 is rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

The Official Action has set forth that it appears that applicant has failed to describe an embodiment having a peer-to-peer connection via a transmission line in combination with having optical communication between the processing elements.

One having ordinary skill in the art reading the description of Figure 8 (optical communication embodiment) would understand from page 11, lines 26-28, that the package 600 is based on a multi-chip module forming a plurality of semiconductor chips 610 on a surface of a package substrate 601. Page 9, lines 6-9 of the present application previously describe that a system LSI may be a module LSI including a plurality of chips and a center chip which is located at the center of the chips and which is operable as the switcher. Accordingly, an optical communication embodiment with a plurality of chips is disclosed.

The discussion of peer-to-peer connection is in connection with two processors and a switcher and discloses that the processor and switcher are part of a plurality of modules, a plurality of chips or a plurality of blocks. Page 12, lines 3-7 of the present application further disclose that from the plurality of semiconductor chips 610, one chip which is located at the center of the package substrate 601 is selected and the selected chip is constructed as a switcher (not shown in Figure 8). Accordingly, a peer-to-peer connection with a plurality of chips is also disclosed.

Therefore, both the embodiment of Figure 8 (as recited in claim 8) and the embodiment of Figure 3 (peer-to-peer) pertain to a plurality of chips and therefore, applicant believes that there is adequate written description to reasonably convey to one of ordinary skill in the relevant art that at the time the application was filed, applicant had possession of the claimed invention and that peer-to-peer and optical communication could be on the same embodiment. Therefore, the rejection should be withdrawn.

Claims 9-12 are rejected under 35 USC §112, second paragraph. This rejection is respectfully traversed. Claim 9 has been amended to depend from claim 4 to clarify that the plural semiconductor chips each include plural processing elements and a single switcher. Claim 12 is amended to clarify

that "the switcher" refers back to the respective switchers of the plural semiconductor chips.

Claims 1-5, 7, 13 and 14 are rejected as anticipated by COUTTS et al. 6,311,165. This rejection is respectfully traversed.

Claim 1 has been amended to clarify that the semiconductor device is an LSI semiconductor device and that the processing elements are part of a system LSI.

One of ordinary skill in the art would not look at the design of an automated teller machine as taught by COUTTS et al. to render obvious an LSI semiconductor device. Specifically, the automated teller machine of COUTTS et al. is composed of hundreds or thousands of integrated circuits, not thousands of electronic components that form a single integrated circuit, as one of ordinary skill in the art would interpret an LSI (large scale integration).

In addition, claim 1 provides that the plural processing elements are located at a plurality of sides of the single switcher. As seen in Figure 3 of the present application, processing elements 101, 102, 103 and 104 are around or at a plurality of sides of switcher 110.

The peripheral elements 364a-364d of COUTTS et al. are beneath router 368 such that outer elements 364a and 364d have much longer connection wires than the elements 364b and 364c.

COUTTS et al. do not disclose or suggest placing the peripheral elements on a plurality of sides of the single switcher. Accordingly, reconsideration and allowance of claim 1 are respectfully requested.

Claims 3, 5, 7 and 13 depend from claim 1 and further define the invention and are also believed patentable over the cited prior art.

Claim 14 is amended to clarify that the semiconductor device is an LSI semiconductor device that comprises a plurality of LSI peripheral input/output processing elements. The comments above regarding claim 1 are equally applicable to claim 14.

Claim 4 is rejected as unpatentable over COUTTS et al. in view of applicant's admitted prior art (Figure 1). This rejection is respectfully traversed.

As disclosed on page 6, lines 1-26 of the present application in discussing prior art Figures 1 and 2 of the present application, these figures also relate to a system LSI 700 or 810. One of ordinary skill in the automated teller machine art would not look to the semiconductor chip art in designing an automated teller machine.

MPEP §2111 states that the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re

Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

One of ordinary skill in the art in the large scale integration (LSI) package art would not interpret the claims to encompass an automated teller machine and thus the proposed combination of references would not be obvious to one having ordinary skill in the art. The comments above regarding claim 4 are equally applicable to claims 9-12 which provide a plurality of semiconductor chips.

New claim 15 provides for an LSI semiconductor device having peripheral dies and a single switcher die. New claim 16 provides that the light is confined by a sealing resin. The combination of references does not teach these features.

New claims 17 and 18 are directed to the embodiments in Figures 4 and 5. The automated teller machine of COUTTS et al. and the single chip of disclosed prior art Figure 1 do not teach or suggest plural stacked packages that form a system LSI.

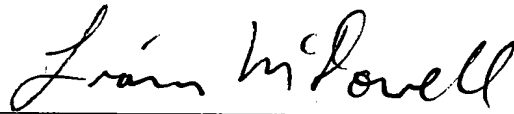
In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Please charge the fee of \$86 for the one extra independent claim added herewith to Deposit Account No. 25-0120.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

Respectfully submitted,

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